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## (54) RESIN-BONDED PERMANENT MAGNET AND MANUFACTURE OF ITS MAGNETIC POWDER

### (57)Abstract:

PURPOSE: To contrive improvement in the squareness of the hysteresis curved line of a resin-bonded type permanent magnet by a method wherein the permanent magnet is formed with the fine particles of  $0.1W20\mu m$  which are crystallized from an amorphous state in the alloy of a specific composition.

CONSTITUTION: The titled permanent magnet is formed with the fine particles of  $0.1W20\mu m$  which are crystallized from an amorphous state in the alloy of composition prescribed as  $R(T1-yMy)z$  (provided that R is the mixture of a kind or two or more kinds of rare-earth metals containing Y, T is a transition metal having Fe or Fe and Co as the main ingredients, M is the metalloid element such as B and the like in the composition of  $0.02 \leq y \leq 0.15$  and  $4 \leq z \leq 9$ ). The alloy of said composition in fused state is quickly cooled by performing a roll quenching or it is cooled using a gas atomization and the like, and after homogenous and amorphous crystalline fine ribbons of  $1\mu m$  or below have been formed, fine particles of  $0.1W20\mu m$  are formed, they are heat treated at the temperature of  $800^{\circ}C$ . It is desirable that the heat treatment is performed in a magnetic field.

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